

# Arent Fox

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## FILED ELECTRONICALLY

Ms. Marlene H. Dortch, Secretary  
Federal Communications Commission  
Office of the Secretary  
445 12th Street, S.W.  
Washington, D.C. 20554

**RE:** Ex Parte Notice, GN Docket No. 09-40, The Commission's Consultative Role in  
the Broadband Provisions of the Recovery Act

Dear Ms. Dortch:

On behalf of Internet2, and in accordance with Section 1.1206(b) of the Commission's Rules, 47 C.F.R. §1.1206(b), the undersigned counsel for Internet2 hereby submits the instant notice of *ex parte* presentation.

On April 2, 2009, on behalf of Internet2, undersigned counsel, as well as Gary Bachula of Internet2, met with Thomas Buckley, Ian Dillner, and Matt Warner of the Wireline Competition Bureau; Kevin Holmes, Brenda Boykin and John Spencer of the Wireless Telecommunications Bureau; and Jeff Cohen of the Public Safety & Homeland Security Bureau. At the meeting, Internet2 discussed the matters set forth in the Attachment, which was provided to the Commission during the meeting.

Respectfully submitted,

  
Alan G. Fishel

Attorney for Internet2



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## **Transformative Broadband for America's Future**

Gary Bachula, Vice President, Internet2

A forward-thinking National Broadband Strategy should focus on the transformative power of advanced networks to unleash new waves of innovation, jobs, economic growth and national competitiveness—and to create new tools to deliver health care, education, and a low carbon economy.

ARRA broadband decisions should target high impact investments with those criteria in mind. Broadband investments should not seek to duplicate today's inadequate infrastructure in new areas; they should seek to rebuild U.S. global leadership in networking – and the economic innovations that networking can enable. Broadband investments should “pull from the future.”

Therefore, a National Broadband Strategy should target 100 megabits to each home or business as goal, and encourage technologies that are scalable upwards from there.

- We are going to need that capacity. A single HDTV stream will use 15 megabits and a video conference will need 15 megabits in each direction. Homes of the future will be watching multiple HDTV signals simultaneously, as well as medical monitoring, alarm management, remote meter reading. Homes will have up to 30 different electronic devices each consuming bandwidth, and the typical home will need 90 megabits—just from the technologies we know about today.
- It is cost efficient. If the government is going to invest in broadband, it should invest in long-term technologies that will last for decades, rather than short-term technologies that will last for 3-5 years. It is not that much more costly to invest in the long-term technologies. If the government invests in DSL-equivalent services and other short-term technologies, we will have to make another round of investment in 3-5 years when these technologies become obsolete. It is smarter to invest once rather than multiple times.
- Institutions need much more bandwidth than homes, because they serve many people, with multiple high-bandwidth uses going on simultaneously. Schools, libraries, community colleges, and hospitals will need 1 gigabit or higher. ARRA investments in long haul and middle mile projects need to take that into account.
- The need for bandwidth has never, and will never, reach an end point – “good enough.” The Internet2 community regularly experiments with uncompressed high definition video conferencing, which requires 1.5 gigabits per second, because the latency issue disappears and the interaction is measurably better. We can only imagine the applications that young people will come up with if they have access to a “gigabit to the dorm room.”